UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
NGUYEN BA, PAUL H

ART UNIT	PAPER NUMBER
2176	

DATE MAILED: 06/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)	
Office Action Summary	09/811,627	WAKAYAMA, TOSHIHIRO	
	Examiner	**Art Unit**	
	Paul Nguyen-Ba	2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _20 March 2001_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-27_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-11 and 17-25_ is/are rejected.

7)☒ Claim(s) _12-16,26 and 27_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _20 March 2001_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some *   c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
         application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)	4)☐ Interview Summary (PTO-413)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)	5)☐ Notice of Informal Patent Application (PTO-152)
Paper No(s)/Mail Date _____ .	6)☐ Other: _____ .

DETAILED ACTION

Notice to Applicant

1.   This action is responsive to original application filed on March 20, 2001.

2.   Claims 1-27 have been considered. Claim 1 is an independent claim.

Priority

3.   Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers

have been placed of record in the file.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

5.   Regarding claims 4, 17, and 18, the phrase "such as" renders the claim indefinite because

it is unclear whether the limitations following the phrase are part of the claimed invention. See

MPEP § 2173.05(d).

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on
> sale in this country, more than one year prior to the date of application for patent in the United States.

7.   Claims 1-6, 17 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by

Terrence Poon et al. ("Poon"), *Efficient Encoding of XML Updates*, IBM Research Division,

(presented at the T.J. Watson Research Center on August 20, 1999).

Independent Claim 1

Poon teaches a computer-implemented system for managing a collection of mutually

dependent information contents networked over the Web, comprising:

a collection of Web documents (pgs. 36 and 38 → applications include updating a

collection of web pages), *referred to as a content net, that comes with computer-executable*

representations of dependency relationships among elements of those documents (pgs. 11, 19-25,

27-34 → i.e. "XML Update Language" (XUL) expresses dependency relationships among

elements of the documents); and

means for automatically propagating updates introduced in elements of said Web

documents to all elements of said Web documents that depend on those updated elements (pgs. 8-

11, 19-25, 27-34 → basic automatically propogating update operations include: add, remove, and

replace).

Claim 2

Poon further teaches the computer-implemented system according to claim 1, wherein

said *content net comprises a collection of content files, i.e., Web documents representing*

information contents (pgs. 21, 27, 28, 36 and 38 → i.e. "web pages" or "source"), *and separate*

collection of constraint files, which represent dependency relationships among elements of

content files (pgs. 19-25, 27-34 → i.e. "update" files).

Claim 3

The computer-implemented system according to claim 2 wherein said *content net is a collection of pairs of a content file and a constraint file, which represents dependency relationships of elements the associated content file on elements in any content file of the content net* (pgs. 19-25, 27-34 → update files (constraint files) are paired with source files (content files)).

Claims 4, 17, and 18

The computer-implemented system according to claim 1, wherein the representation of said dependency relationships comprises:

unique identifiers for active elements, i.e., elements involved in dependency relationships where the uniqueness is ensured by values of a designated attribute, called content variables, uniquely assigned to those active elements, or by an equivalent means (pgs. 19-25, 27-34 → name = "a", "b", "c", or "d", etc.; type = "1", "2", or etc.); and

dependency expressions written in Web-standard languages such as XML (Extensible Markup Language) and MathML (Mathematical Markup Language), using element identifiers such as content variables (see generally pgs. 1, 11 → i.e. "<u>XML</u> Update Language")

Claim 5

The computer-implemented system according to claim 4, *wherein said dependency expressions follow the format of dependency clauses or a format equivalent to dependency clauses, and are represented in constraint files or embedded in information contents of Web documents in the content net, where a dependency clause comprises three terms, the first term representing a content variable (i.e. "xfl1", "xfl2, "xfl0"), the second term a set of content*

variables (i.e. "a", "b", "c"), and the third term a definition of a dependency relationship

between the content variable in the first term and the content variables in the second term (i.e.

<parent = >, <psib= > (previous sibling)) (pgs. 12-14).

Claim 6

The computer-implemented system according to claim 5, wherein said dependency

clauses are:

functional dependency clauses, which have no claim tree-structure, hierarchical element

corresponding the relationships between the term and the elements corresponding to the content

variables the second term; **or**

hierarchical dependency clauses, which the elements corresponding to the content

variables of the second term are hierarchically related to the element corresponding to the

content variable of the first term (pgs. 5-10 → XML tree structure).

Claim Rejections - 35 USC § 103

8.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9.   Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Terrence Poon et

al. ("Poon"), *Efficient Encoding of XML Updates*, IBM Research Division, (presented at the T.J.

Watson Research Center on August 20, 1999).

Claim 7

Poon teaches the computer-implemented system for managing a collection of mutually dependent information contents networked over the Web with respect to claim 6 discussed above, but does not specifically teach a third term in said functional dependency clause is a functional expression involving operators of MathML, operators that can be referenced in MathML, and content variables in the second term in the clause.

It was commonly known to those of ordinary skill in the art that MathML is a markup language derived from XML for the purpose of describing mathematics as a basis for machine to machine communication and providing a much needed foundation for the inclusion of mathematical expressions in Web pages.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to include operators of MathML in the teachings of Poon for the purpose of describing mathematics as a basis for machine to machine communication and providing a much needed foundation for the inclusion of mathematical expressions in Web pages.

10.   Claims 8, 19-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terrence Poon et al. ("Poon"), *Efficient Encoding of XML Updates*, IBM Research Division, (presented at the T.J. Watson Research Center on August 20, 1999), in view of Vincent et al. ("Vincent"), U.S. Patent Application Publication No. 2001/0049682.

Claims 8 and 19-24

Poon teaches the computer-implemented system wherein given a set of updated active elements, identifies its update candidate set, which contains all active elements, or corresponding content variables, which depend on some active elements in the given set (pgs. 19-25, 27-34 → update files (constraint files) identify the update candidate set of active elements), but does not specifically teach determining the presence or absence of cyclic dependencies among active elements in Web documents in the content net.

However, Vincent teaches a system that allows the identification of cyclic dependencies (pg. 1 – [0005]; pg. 2 – [0019] for the purpose of automatically detecting invalid dependency objects and eliminating the time spent figuring out the actual valid and invalid dependencies.

Since Poon and Vincent are both from the same field of endeavor, the purposes disclosed by Vincent would have been recognized in the pertinent art of Poon. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teaching of Poon with the teachings of Vincent to include a system that allows the identification of cyclic dependencies among active elements in Web documents in the content net for the purpose of automatically detecting invalid dependency objects and eliminating the time spent figuring out the actual valid and invalid dependencies.

11. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terrence Poon et al. ("Poon"), *Efficient Encoding of XML Updates*, IBM Research Division, (presented at the T.J. Watson Research Center on August 20, 1999), in view of Page, U.S. Patent No.6,285,999.

Claim 9

Poon teaches the computer-implemented system for managing a collection of mutually

dependent information contents networked over the Web with respect to claim 8 discussed

above, but does not specifically teach a module which, given an update candidate set, recursively

updates elements in the update candidate set.

However, Page teaches a recursive definition of updating page ranks (col. 2, lines 67 *et*

seq.; col. 12, lines 25-28) for the purpose of managing a database of documents, the world wide

web, or any other hypermedia database by assigning ranks.

Since Poon and Page are both from the same field of endeavor, the purposes disclosed by

Page would have been recognized in the pertinent art of Poon. It would have been obvious at the

time the invention was made to a person having ordinary skill in the art to modify the teaching of

Poon with the teachings of Page to include a module which, given an update candidate set,

recursively updates elements in the update candidate set for the purpose of managing a database

of documents, the world wide web, or any other hypermedia database by assigning ranks.

Claim 10

Poon teaches the computer-implemented system for managing a collection of mutually

dependent information contents networked over the Web with respect to claim 8 discussed

above, but does not specifically teach an update ranking module which, given an update

candidate set, computes update orders, ranks, for elements, or corresponding content variables, in

the update candidate set; and a module which updates elements in a given update candidate set,

following ranks determined by the update ranking module.

However Page teaches updating the estimate of the rank for each of the linked documents using ranks for the one or more linking documents and processing the linked documents according to their updated ranks (col. 9, lines 65-67 to col. 10, lines 1-2) for the purpose of managing a database of documents, the world wide web, or any other hypermedia database by assigning ranks.

Since Poon and Page are both from the same field of endeavor, the purposes disclosed by Page would have been recognized in the pertinent art of Poon. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teaching of Poon with the teachings of Page to include a module which updates the estimate of the rank for each of the linked documents using ranks for the one or more linking documents and processing the linked documents according to their updated ranks (col. 9, lines 65-67 to col. 10, lines 1-2) for the purpose of managing a database of documents, the world wide web, or any other hypermedia database by assigning ranks.

12.   Claims 11 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terrence Poon et al. ("Poon"), *Efficient Encoding of XML Updates*, IBM Research Division, (presented at the T.J. Watson Research Center on August 20, 1999), in view of Wu et al. ("Wu"), U.S. Patent No. 2002/0035592.

Claims 11 and 25

Poon teaches the computer-implemented system for managing a collection of mutually dependent information contents networked over the Web with respect to claim 9 discussed

above, but does not specifically teach a station, namely a browser-based presentation of a Web

document representing information contents in a content net, as a collection of ports for

information interchange, or a port complex, over the Web; and a station net, namely a collection

of stations networked over the Web and accessible to human users in the Web environment,

where each station in the collection is derived from a Web document representing information

contents in a designated content net.

However, Wu teaches an Internet portal system for accomplishing a multi-component

task involving interaction with one or more Internet Web sites is provided, comprising an

Internet-connected server having access to client-related data; an internet-capable client station

usable by a client; and software executing on the server for managing individual component

tasks in execution of the multi-component task (pg. 1 – [0005]) for the purpose of allowing a

user to accomplish a main task including completion of sub-tasks performed by diverse WEB

services without requiring that the user manually visit each WEB service associated with a sub-

task (pg. 1 – [0004]).

It would have been obvious at the time the invention was made to a person having

ordinary skill in the art to modify the teaching of Poon with the teachings of Wu to include an

Internet portal system for accomplishing a multi-component task involving interaction with one

or more Internet Web sites is provided, comprising an Internet-connected server having access

to client-related data; an internet-capable client station usable by a client; and software

executing on the server for managing individual component tasks in execution of the multi-

component task for the purpose of allowing a user to accomplish a main task including

completion of sub-tasks performed by diverse WEB services without requiring that the user

manually visit each WEB service associated with a sub-task.

Allowable Subject Matter

13.   Claims 12-16, 26, and 27 are objected to as being dependent upon a rejected base claim,

but would be allowable if rewritten in independent form including all of the limitations of the

base claim and any intervening claims.

Conclusion

14.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Paul Nguyen-Ba whose telephone number is (703) 305-8776.

The examiner can normally be reached from 10 am - 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Joseph Feild can be reached on (703) 305-9792. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PNB

JOSEPH FEILD
SUPERVISORY PATENT EXAMINER